-

Environmental Assessment

for

Long Tom Watershed Transportation Management Plan Implementation
OR 094-EA-01-09

Prepared by:_____ Date: _____
Mark Stephen/Eric Meyers
Coast Range Resource Area

Reviewed by: _____ Date: _____
Gary Hoppe
Environmental Coordinator, Coast Range Resource Area

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
EUGENE DISTRICT OFFICE

ENVIRONMENTAL ASSESSMENT NO. OR094-EA-01-09

LONG TOM WATERSHED TRANSPORTATION MANAGEMENT PLAN IMPLEMENTATION

I. INTRODUCTION

This Environmental Assessment (EA) will address the decommissioning of approximately 50 miles of BLM controlled road. Decommissioning would prevent routine vehicle traffic by barricading, removing stream crossing culverts, and / or water barring. Some of the proposed roads are now closed and measures could be taken to prevent erosion. Decommissioning would place these roads in storage however, these roads would be reopened in the future as needed for either private or BLM resource management. The proposed project area is located in the Long Tom Watershed which is located in Western Lane County, west of the city of Eugene. The watershed lies in the Willamette River Basin within the Coast Range Province.

A. CONFORMANCE

The proposed action and alternatives are in conformance with the *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl, April 1994 (ROD)* , and the *Eugene District Record of Decision and Resource Management Plan, June 1995 (Eugene District ROD/RMP)* as amended by the *Record of Decision for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines, USDA Forest Service and USDI Bureau of Land Management January 2001.* The analysis contained in these EIS's are incorporated into this document by reference.

Watershed analysis has been completed for the Long Tom Watershed. The watershed analysis included an analysis of existing roads within the watershed to identify road related resource issues and evaluated aquatic, terrestrial and human uses within the watershed. This analysis also included the development of a Transportation Management Plan for the Long Tom Watershed (*Appendix D of the watershed analysis*) which identified recommended actions relative to road maintenance levels, road closures, and road repairs or improvements.

B. NEED FOR THE PROPOSED ACTION

Road decommissioning would contribute toward the attainment of Aquatic Conservation Strategy objectives and watershed objectives while reducing road maintenance needs within the watershed. The agency's capacity to conduct road maintenance has recently declined as funds for maintenance have been reduced. Non-maintained roads present a liability for both natural resources and public safety.
The Long Tom Watershed Analysis identified road closures as opportunities to benefit aquatic and

terrestrial wildlife habitat within the watershed. Road decommissioning would reduce stream sedimentation, the extent to which the existing road system within the Riparian Reserve functions as an extension of the stream network, and would restore or enhance the connectivity of the stream channel and Riparian Reserve for both aquatic and terrestrial wildlife resources. Road decommissioning would also reduce potential risk of future road fill failures; would reduce the spread of noxious weeds; and would also reduce illegal activities such as dumping and poaching.

C. PRIORITIES FOR ALL ACTIONS

The Coast Range Resource Area ID Team designated the following priorities for actions identified in the Long Tom Transportation Management Plan:

- = Close roads in areas where resource damage is presently occurring.
- = Replace stream culverts to accomodate 100 year flood and aquatic wildlife passage.
- = Resurface roads on riparian “open”roads currently lacking sufficient rock depth and other improvements to prevent erosion.
- = Ensure roads have drainage devices installed that do not require maintenance.

Prioritization and accomplishment of the above actions would also be dependent upon the availability of budget resources.

II. PROPOSED ACTION AND ALTERNATIVES

A. PROPOSED ACTION

The proposed action would decommission approximately 50 miles of road in the Long Tom Watershed. Decommissioning would close specified roads to vehicular traffic by removing stream crossing culverts, water barring and barricading. Some of these roads may be currently closed by vegetation encroachment and/or slides. This action would ensure decommissioning be accomplished to a standard to prevent future erosional or drainage problems. This action would reduce the potential for soil erosion and the spread of noxious weeds. It would also help protect natural resources from illegal activities such as dumping and poaching. These roads would be decommissioned over a period of 5 years (refer to Appendix A). In the event any closed road is needed for resource management, these roads would be reopened to vehicle traffic. See Appendix A for a list of road numbers, miles and approximate closure dates.

DESIGN FEATURES OF THE PROPOSED ACTION

There are many different road decommissioning and closure treatments that successfully result in meeting the objectives outlined for a road segment. The initial identification of roads for maintenance, restoration, decommissioning, or obliteration will determine which treatments are needed to comply with the Aquatic Conservation Strategy (ACS) and comply with the Clean Water Act to meet state water quality requirements. Appropriate measures should be used that match future maintenance requirements of each individual road.

To meet the objectives to prevent erosion and sedimentation of streams from roads and to restore site productivity to roads no longer needed, the following is a list of treatments that can be utilized

for road management. Geology, soils and environmental indicators such as tension cracks along the fillslope, rutted treads, plugged culverts and observed OHV use can be used to determine which practices would best suit the location. Treatments may differ with roads that are dirt versus roads that have pit run and a lift of gravel. Treatments may differ for each level of road closure or maintenance level.

1. Road decommissioning - Specific prescriptions for decommissioning would be applied per road segment and would be dependent upon resource concerns relative to the road segments being decommissioned Road decommissioning could include the following:

   - Tilling the length of the road. Tilling would be accomplished with dozer and sub soiler implement or a track mounted excavator.
   - Removal of gravel or pulling of gravel into the ditch line.
   - Scarification of roads or creation of planting areas.
   - Removal of side cast soils from fill slopes with a high potential for triggering landslides.
   - Filling and contouring of cut slope ditch lines to the adjacent hill slope.
   - Removal of culverts.
   - Stream crossing stabilization measures (*Design feature 4 below*).
   - Installation of water bars, cross sloping or drainage dips along the entire length of the road ensuring adequate drainage for unmaintained roads and precipitation runoff into vegetated areas and away from streams or unstable road fills.
   - Blocking the road surface from all access points using barricades appropriate for the road. Barricading, gating or earth berm barriers would block vehicle traffic reducing reoccurring sediment delivery during high precipitation periods.
   - Placing of slash, boulders, and logging debris on the road surface along as much of the length of the road as possible. An excavator could pull trees from the adjacent forest and trees could be falled to block the road bed. Trees could be pulled onto the roadway to add coarse woody debris, deflect runoff, discourage OHV use and to help promote vegetative growth.
   - Native grass seeding where appropriate for erosion control (*Design feature 3 below*).

2. Road decommissioning actions resulting in soil disturbance would occur during dry periods to reduce short term sedimentation impacts.

3. In order to slow the spread of noxious weeds, all equipment would be cleaned prior to its arrival on Bureau of Land Management land and cleaned after work in each infested area. In extensively disturbed sites such as culvert removals, native seed would be used to vegetate the site. If native seed is not available then annual and perennial rye mixtures with strict guidelines on seed purity (no crop or noxious weed content), or dry straw mulch/bales would be used. This application would help reduce erosion and short term sedimentation potential.

4. Recontouring of stream channel crossings - Care would be taken to prevent sedimentation at stream crossings during road decommissioning activities. Culvert removal sites would be resloped and stream channels widened to original ground conditions, or reshaped to stable conditions to minimize short term sediment. Placement of mulch or mats and seeding with

native grass seed would occur for erosion control along the stream banks. Rock and large wood may be placed in the stream channel to simulate natural conditions.

5. When appropriate, soil scientists, hydrologists and biologists would be consulted.

6. If in connection with the proposed action there is an encounter or awareness of any objects or sites of cultural value, such as historical or prehistorical ruins, graves, grave markers, fossils or artifacts, the site specific proposed action would be suspended until mitigative measures are established.

B. NO ACTION ALTERNATIVE

The No Action Alternative would be to leave these road segments in their present condition with no future scheduled maintenance.

III. AFFECTED ENVIRONMENT

PROVINCE- OREGON COAST RANGE PROVINCE

The Coast Range Province contains approximately 2.95 million acres and extends from the Columbia River to the Umpqua River Basin. The Coast Range Province includes coastal mountains of Western Oregon from the Columbia River to the Middle Fork of the Coquille River, and from the continental shelf to the western edge of the Willamette Valley.

WATERSHED - LONG TOM WATERSHED

The Long Tom Watershed is located in the Willamette River Basin and is found in the southern portion of the Willamette Valley, Oregon. The Long Tom Watershed encompasses approximately 262,749 acres and the smaller communities of Veneta (population 2,950), Junction City (pop. 4,400), Monroe (pop. 555), Harrisburg (pop. 2,535), and Coburg (pop. 790). Most of the watershed is on private lands. The Long Tom River originates in the Coast Range Mountains and travels 55 miles before entering the Willamette River. The largest tributary of the Long Tom Sub-basin is Coyote Creek, some of which is inundated by Fern Ridge Reservoir. The Long Tom Sub-basin has about 350 miles of perennial streams that drain 410 square miles of Lane and Benton Counties (ODFW, 1992).

PROJECT AREA ROADS

The project area includes approximately 51 miles of road segments within the Long Tom Watershed that traverse through private lands and public BLM lands. On BLM lands, the road segments are located within both the uplands and Riparian Reserve of the Matrix and Late-Successional Reserve (LSR) land use allocations (LUAs). Bureau of Land Management roads accessed by private roads are not considered public roads in context of public access rights.

OWNERSHIP

Ownership is a checkerboard pattern, with private and state land adjacent to BLM. BLM lands make up about 8.4 percent of the watershed and are concentrated in the Coast Range foothills or “Valley Fringe”. The Valley Fringe or Coast Range foothills makes up about 22.6 percent (97,415 acres) of the watershed. The Long Tom Valley Fringe is highly dissected relative to ownership.

The BLM manages approximately 20,343 acres or approximately 21 percent of the Valley Fringe with the remainder in State and private ownership. The State of Oregon administers approximately 1,947 acres or 2 percent of the Valley Fringe. The remaining 75,125 acres (77%) of the Valley Fringe is within private land holdings.

HUMAN USE

Forestry and agriculture are the primary land uses. About 50 percent of the Long Tom Watershed is forested with commercial forests generally restricted to the upper reaches of the watershed. Most of the forested lands in the Long Tom subbasin have been logged at least once. About 40 percent of the subbasin is suitable for agriculture (ODFW, 1992). The majority of cultivated lands extend from the mouth of the river up to and surrounding Fern Ridge Reservoir. Above the reservoir, agriculture is limited to the narrow valley floors of the Long Tom and its larger tributaries (ODFW, 1992).

RECREATION

There are no developed BLM recreational sites within this watershed. All recreational activities are dispersed use such as camping, hunting, fishing, driving for pleasure, off-highway vehicle activity, and mountain bicycling. The checkerboard ownership contributes to this dispersed use.

Several roads within this watershed were assigned seasonal closures due to critical resource or watershed restoration concerns in the Eugene District Record of Decision and Resource Management Plan (RMP June, 1995). Some road designations were changed during this Transportation Management Planning (TMP) process which takes into account all current resource concerns within the watershed. In essence, the TMP maintains the RMP.

VISUAL RESOURCES

There are 670 acres in this watershed which are managed by Visual Resource Management (VRM) III standards which have the following objective: To partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

The rest of this watershed is managed by VRM VI standards which have the following objective: To provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

GEOLOGY

The Long Tom watershed is geologically mapped within the Flournoy/Tyee Formation that consists of massive and rhythmically bedded feldspathic and micaceous sandstone and subordinate siltstone. Each bed is graded and ranges from coarse sandstone at the base to fine sandstone and siltstone above. (Walker and Macleod, 1991).

Estimates of erosion rates in the Oregon Coast Range have been obtained by numerous studies. In comparing natural erosion rates of western Oregon, the Coast Range exceeds the Cascade Range. Erosion and sedimentation data from the Pacific Northwest indicates that though rates are variable, natural background erosion rates for the Coast Range probably range between 100-150 metric tons/km2, while the Cascades average 25-50 metric tons/km2 (Beschta, 1978; Larson and Sidle, 1980; Swanson, 1987).

SOILS

Soils of the Long Tom area developed from sedimentary rocks and typically are deep, permeable and productive. Site Index for the soils in the area ranges between 120 and 180 (SCS, 1987). The Long Tom watershed is located within the udic-mesic moisture regime and is generally in the Bohannon-Digger-Preacher Soil Association. Typically, this map unit consists of 40% Bohannon soils, 25% Digger and 20% Preacher. Some of the soil series associated with these soils include Peavine, Honeygrove and Blachly. Because permeability tends to be rapid in many of the Coast Range soils, the soils tend to have rapid runoff and a high hazard of water erosion.

Precipitation that occurs is usually rain and amounts range between 40 to 74 inches, east to west. The soil temperatures remain warm and moist soil conditions through late spring and early summer favor the oxidation of the soluble form of iron, a basic constituent of the parent Tyee sandstone and intrusive rocks of the area. With high precipitation amounts, excess amounts of moisture move through the soil profile removing soluble products of the weathering processes, but stranding the iron which produces soils in the area that are red, such as Honeygrove soils.

Estimated average residence times of 5000-6000 years were calculated for colluvium on the side slopes and hollows in basins from Coos River to the Siuslaw River (Reneau and Dietrich, 1991). Oldest soils in the area like Honeygrove, have deep well developed profiles where horizons are clearly differentiated from one another. Honeygrove soils, occurring on stable ridges in the Coast Range have been dated at 9,570 years old. Soils on bottomlands and steep side slopes tend to be much younger (500 years) where weathering of the soil profile is interrupted by erosional and depositional processes.

Slope Stability

High risk sites for landslides exist in the Long Tom drainage. Inventories on BLM lands have identified some areas as potentially unstable based on field indicators and factor of safety modeling and have been withdrawn from management activities using the Timber Production Capability Classification (TPCC) FGNW. Although many segments of roads that have been identified as unstable have had corrective action taken, flood events, steep slopes and concentrated flows on roads may lead to the development of unstable areas. Continual maintenance/repair and periodic onsite investigations for environmental indicators of instability are necessary management practices in identifying high risk areas.

Soil Compaction/Site Productivity

There are many compacted abandoned native surface roads and skid roads that are remnants of historic logging systems that are still visible on the landscape in the watershed. These roads are not inventoried and frequently have returned to a vegetative state, but compaction is still evident. Additionally, there are human activities on roads that present negative impacts to soils. The Long Tom watershed is located in close proximity to Eugene allowing easy access to the public and garbage and meth-amphetamine (meth) lab dumping is frequently observed.

Surface Erosion from Roads

There are approximately 110 miles of mapped BLM controlled road within the Long Tom drainage. Of this approximately 82 miles are crushed rock, 24 miles are dirt and 4 miles are asphalt. According to the Long Tom Watershed Analysis, a proportion of the road network is capable of delivering flow and sediment to the stream channel system. Many segments of roads that have had high sedimentation rates were identified and erosion control measures have been applied. Although there may not be chronic heavy traffic from logging, the close proximity of the BLM lands to the urban/rural interface of the Eugene/Springfield area attracts commercial forest product permitees, touring and recreational traffic.

An unknown and uninventoried amount of abandoned native surface roads and skid roads exist on BLM ownership. Many of these roads have revegetated, but some have been reopened by Off Highway Vehicle (OHV) use and pose water quality issues. An undetermined number of miles of OHV user-created routes exist on BLM lands. These roads are frequently hidden within forests and may deliver sediment at stream crossings. These roads are not maintained and have the potential for high sedimentation at point sources.

The BLM is receiving complaints from adjacent landowners who have concerns of soil degradation in their forests. Because of the “checker-board” land ownership in the watershed, management of OHV roads and trails is problematic. OHV user-created roads are conduit roads to private ownership sections. OHV use is on the increase and is impacting an increasing amount of area in the Long Tom watershed. Motorized trail bikes use unmarked trails through the forests. As these trails widen, larger 4 X 4 trucks gain access and range deeper into the forests. Unmaintained roads and trails used by OHVs rapidly degrade until there are no ditch lines and the treads have deep gullies (greater than a meter deep) that carry concentrated flow of water during rain events, delivering sediment to streams. The BLM has attempted to block some of the trails, but frequently the closures are circumvented by OHVs.

CULTURAL RESOURCES

Archaeological surveys conducted beginning in the 1930's and continuing through the past decade have discovered the locations of numerous prehistoric sites in the Long Tom Watershed. Excavations conducted on a limited number of these sites have provided evidence that the Long Tom Watershed has been occupied for more than six thousand years. The Long Tom Watershed is within the historic territory of the Chelamela band of the Kalapuya and was occupied by them until the signing of the Dayton Treaty in 1855 when the Kalapuya were removed to the Grand Ronde reservation. Euro-American presence in the watershed dates to the period of the 1830's when Hudson’s Bay Company fur brigades traversed the Long Tom drainage on annual trips to southern Oregon and northern California. The earliest homestead claims were filed prior to 1850 and by 1855 most of the arable land in the watershed had been claimed. No known cultural resource values are located on BLM administered land within the Long Tom Watershed.

LANDSCAPE STRUCTURE & PATTERN

The pattern of the current landscape in the Long Tom Watershed is largely influenced by the checkerboard ownership pattern. The Long Tom Watershed is highly fragmented in respect to the distribution among the various vegetation classes. The vegetation reflects years of intensive forest management and the checkerboard land ownership pattern within the watershed.

BOTANICAL RESOURCES

Within the Long Tom Watershed, botanical surveys have been conducted primarily in support of other resource programs such as timber management, wildlife enhancement, recreation projects, and special use permits. These surveys were designed to ensure adherence with the Endangered Species Act (1973), the BLM's Special Status Species Policy (USDI BLM 1988), the Northwest Forest Plan (USDA Forest Service and USDI BLM 1994), and the Eugene District Resource Management Plan (USDI BLM 1995). Most recently, amendments to the Survey and Manage Standards and Guidelines (USDA Forest Service and USDI BLM 2001) have been implemented, including associated status changes for some of the species discussed below.

Wetland mitigation and management work have also prompted botanical surveys on lands in the Willamette Valley's West Eugene Wetland Project Area. While the West Eugene Wetlands fall within the Long Tom Watershed, the proposed project does not include and will not affect land within the West Eugene Wetlands Project Area. Therefore, botanical resources within the Willamette Valley Physiographic Province are not analyzed here.

VASCULAR PLANTS

By the end of 1999, approximately 4000 acres within the project area had received field surveys for special status vascular plants. Thus, about 5 percent of all lands and 25 percent of BLM lands in the project area have been surveyed for vascular plant resources. These botanical surveys have been relatively evenly distributed over the entire project area and thus should be representative of the watershed. A map showing lands with botanical surveys for the watershed is located in the Coast Range Resource Area Botany files.

Three special status vascular plants occur on BLM lands within the boundaries of the project area. These species are listed below, followed by their current status:

- tall bugbane (*Cimicifuga elata*) - Bureau Tracking
- branching montia (*Montia diffusa)* - Bureau Tracking
- broomrape (*Orobanche pinorum*) - Bureau Tracking

NON-VASCULAR PLANTS (LICHENS, BRYOPHYTES AND FUNGI)

Surveys for non-vascular plants began during spring 1998 on the Eugene BLM District. In response to the Northwest Forest Plan (USDA Forest Service and USDI BLM 1994), surveys were focused on what were then "Protection Buffer" and "Survey Component 2" species. The BLM was not required and did not systematically survey for Survey and Manage "Component 1, 3, or 4" species.

There is little available information about the distribution and occurrence of special status non-vascular species within the project area. As of fall 1999, only four proposed project areas involving approximately 241 acres (0.09% of the watershed and 1.1% of BLM ownership) were surveyed for these species in the Long Tom Watershed. Currently, there are no known sites of special status or Survey and Manage non-vascular species on BLM lands in the project area.

NOXIOUS AND NON-NATIVE PLANTS

Roads are a primary medium for the establishment and expansion of most noxious and nonnative plant species on BLM forest land. Contaminated gravel and fill, spread of weed seed by road construction, maintenance, and other disturbance activities, and introduction of new weed species

by recreational vehicles and equestrians are factors in the relationship of roads and noxious weeds.

A 1996 noxious weed survey on BLM lands identified widespread, low to moderate concentrations of Scot's broom (*Cytisus scoparius*) along roadways within the Long Tom Watershed. Scattered spot locations of meadow knapweed (*Centaurea pratensis*) and St. Johnswort (*Hypericum perforatum*) also occur on BLM lands and roads within the project area.

HYDROLOGY & STREAMFLOW

The Long Tom Watershed differs from other watersheds in the Eugene District as it contains urban and agricultural lands in addition to forested lands. There are 3 subwatersheds draining the "Valley Fringe" or Coastal foothills area. To the south is Coyote Creek and west from the Coast Range is the upper Long Tom River drainage. These two flow into Fern Ridge reservoir. North of this is Ferguson Creek that drains into the Long Tom below Fern Ridge Reservoir.

Most of the watershed is below 1000 feet elevation. Precipitation is mostly rain, and rain on snow events are highly unlikely. Average monthly minimum temperatures are above freezing. Annual precipitation increases from east to west through the watershed ranging from a low of 40 inches per year south of Eugene to a high of 74 inches on the highest and western most points. The majority of the precipitation falls from November through March. Stream flow patterns are closely correlated with precipitation although peak flows occur slightly later in the year than peak precipitation. The greatest daily precipitation generally occurs in December and January.

AQUATIC SPECIES AND HABITAT

Native fish species include both salmonids and non-salmonids, and there are a variety of introduced species. The most widely distributed salmonid is the cutthroat trout, generally found where suitable habitat is present. Cutthroat trout and sculpin spawn and rear in upper reaches of the Long Tom River and tributaries. Rainbow trout and coho salmon were stocked in some streams during past years. No coho salmon are now known to use streams in the watershed, and any rainbow or steelhead use is indefinite at this time. Dace, redside shiner, and western brook lamprey also have been found in the watershed. In and near Fern Ridge Reservoir, fish species include largemouth bass, bluegill, crappie, pumpkinseed sunfish, bullhead, and carp. Amazon Creek and ponds in the watershed provide habitat for warm water game fish and other species. Lower Long Tom River also contains the following fish:

Mountain whitefish, channel catfish, warmouth, sucker, mosquitofish, peamouth, chiselmouth, northern pikeminnow, three-spined stickleback, and Pacific lamprey.

Some chinook have entered the lower Long Tom River in the fall when higher flows were released from Fern Ridge Reservoir, and juvenile chinook may rear in the lower part of the river during winter. There are historic records, indicating bull trout may have been found in the Long Tom Watershed. It is unlikely they would have reproduced there, although there may have been foraging adults that migrated to colder water to spawn. Oregon chub previously were in the watershed, but now there are no remaining known populations. Stream channel alterations and flood control measures have reduced chub habitat, and there has been predation by exotic fish and bullfrogs. Crayfish also are common in various streams within the watershed.

BLM manages a limited amount of fish habitat in the upper watershed, where riparian vegetation contains many hardwoods, brush, and second growth conifers on and near BLM ownership. The headwater streams have moderate to steep gradients with gravel, rubble, and sand in the channels. Mass wasting in the watershed, and stream bank erosion occur at various locations in the watershed. Lower stream reaches, have larger amounts of silt present, where stream gradiants and riffles are relatively low. Temperatures that exceed levels for salmonids are common, especially in lower reaches of the Long Tom River and a few tributaries.

Many roads have been constructed near and across streams at various locations. Culverts at some of the roads obstruct fish passage for upstream migration.

The amount of beaver activity, which would have contributed substantially to fish habitat, has been reduced by removal of the beaver from most of the basin. However, beaver dams and ponds have recently been observed in several streams in the watershed.

Fern Ridge Reservoir provides water for stream flows, in addition to irrigation, recreation, wildlife, and retention for flood control. No fish passage facilities are available at the dam. A fish ladder is located farther downstream at a dam in Monroe, however, the dam limits upstream passage of fish (including for any potential chinook migration). Irrigation dams exist at various locations in the watershed.

WILDLIFE

Douglas fir forests comprise the majority of wildlife habitat in the Valley Fringe. Since the arrival of European settlers and subsequent logging, the forest structure has transformed from large, interspersed stands of mature and old-growth forest to a more patchy arrangement of younger stands interspersed with older remnant stands.

Federally Listed Species

Three species federally listed as Threatened are known to exist within the watershed: the northern spotted owl (*Strix occidentalis caurina*), marbled murrelet (*Brachyramphus marmoratus*) and the bald eagle (*Haliaeetus leucocephalus*). All three species rely on older trees with large branches for nesting.

The federally Endangered Fender's blue butterfly is documented within the watershed, but not within the Valley Fringe. It is reliant on the federally threatened Kincaid's lupine as a larval host plant. Although not documented in the Valley Fringe, it could exist here, given the proper habitat and host plant.

Bald Eagle

One historic bald eagle nest is known to exist on Bureau managed lands within the Valley Fringe area of the watershed. As is typical, the nest lies in a remnant old-growth stand and is in the upper portion of a large Douglas fir with a commanding view of the vicinity, including Fern Ridge Reservoir, the presumed foraging area. This nest has been successful in fledging eagles for over ten years with only two years of non-production. Access to this area is restricted during the nesting period.

Northern Spotted Owl
Five historic spotted owl activity cores, totaling 503 acres, have been designated within the watershed. Occupancy of these sites is dynamic, with changes over the years. During the nesting season of 2000, two of these sites were occupied by either spotted owl pairs or resident singles with no reproduction documented, and two of these sites had barred owl occupancy.

Currently, the watershed is composed of approximately 8,000 acres of suitable habitat for this species. This habitat is described as mature or old-growth conifer stands with multi-storied canopies, snags and down wood. Mature trees are able to provide suitable nest substrates in the form of large branches or cavities, while multiple canopy layers provide cover from the weather and predators. Snags and coarse woody debris are an important component since they provide habitat for the owls' prey base.

Marbled Murrelet
There are no records of marbled murrelet occupancy in the watershed in spite of its location within the range of the murrelet (0-50 miles from the coast). Surveys for these seabirds have been conducted in various locations throughout the watershed without any documentation of occupancy (behavior indicative of nesting). Habitat for the murrelet closely parallels that of the spotted owl except murrelets only utilize the forested setting for nesting. The non-nesting season is spent in the ocean and bays along the coast.

Again, mature trees with large branches are required to provide adequate nesting substrates. These birds do not build a nest, but rather eggs are laid on a branch usually covered with a thick cover of moss or debris. As the adult incubates the single egg and later, as the young move around, a small depression or nest cup is formed. It is these large, moss or debris covered limbs that are essential for the murrelet to successfully nest. Branches from multi-storied canopies provide the same cover desirable for the spotted owl. There are approximately 5900 acres of suitable habitat for this species.

<u>Special Interest Species Not Federally Listed</u>

Roosevelt Elk
This species was abundant throughout this watershed until the market hunting era at the turn of the century. By the time market hunting was prohibited, elk herds had been reduced to small

groups scattered along the coast and in the Cascade Range. Through conservation efforts during the last 80 years, this species has made a comeback.

Elk are an edge adapted species using open early successional forest habitat and grasslands to forage and older forest for cover and protection. In the Coast Range, no seasonal migration occurs due to moderate temperatures and lack of snow. The Valley Fringe provided excellent habitat for elk. Foraging areas were readily available along the edge of the Coast Range and the Willamette Valley. Disturbances such as stand replacement fires that swept through the area resulted in preferred forage sites.

Today, the watershed is part of three ODFW Big Game Management Areas (BGMA) - the Willamette, the Alsea and Siuslaw. The Willamette BGMA, where about 40% of the watershed is located, has been designated an Elk Emphasis Area. About 10% of the watershed lies in the Alsea BGMA where elk numbers have been on the rise since the early 1980s. As of 1994, the

population estimate was 5,600 elk which is approaching ODFWs management objective of 7,000 animals. The remaining half of the watershed is located in the Siuslaw BGMA. Current population levels in this unit are primarily due to the ODFW transplant programs of the 1970s. Elk are widely scattered here and the population is relatively low (1994 estimates ~ 1,200 animals for 1,500 sq. miles). The population management objective is 4,000 individuals.

Elk habitat in the Valley Fringe falls mostly in the Siuslaw BGMA while the area north of Highway 36 is located in the Alsea unit. As the human population increased in the valley itself, foraging opportunities there were reduced, while clearcuts in the Valley Fringe and west provided increasingly more forage habitat.

In the Valley Fringe, harvests appear to be concentrated in the northern half. On BLM lands within the watershed, approximately 5000 acres are considered foraging habitat. About 15,000 acres qualify as hiding cover while approximately 11,000 acres qualify as thermal cover. Because of shorter tree rotation periods (~60 years), private holdings within the watershed are not expected to provide much in the form of thermal cover, but rather would offer forage and hiding opportunities.

Human accessibility to elk habitat, particularly during the hunting season, is one of the most influential factors in management for this species. Hunting not only impacts numbers, but affects distribution and herd dynamics as well. In addition, high accessibility can cause disturbance, displacement and mortality among elk.

Presently, the road density on Bureau lands within the watershed is approximately 4.2 miles for every square mile. According to the Eugene District Resource Management Plan (RMP), elk habitat areas should have a road density of about 1.5 miles of road for each square mile (or less). No figures are available for private road densities, but access on these roads tend to be limited, and thus, would have less impact to elk due to disturbance.

Black-tailed deer

These animals are abundant within the watershed. This species prefers areas where dense hiding cover is associated with more open foraging areas. This allows desired foraging opportunities with readily accessible hiding cover. Deer tend to browse more than graze, but often occur in the same habitat as elk.

The arrangement of foraging and hiding cover varies between the Valley Fringe and the remainder of the watershed, with the Valley Fringe portion providing comparatively more hiding cover than the valley. Currently, foraging opportunities do not seem to be limiting factors in population numbers.

Black Bear

Past conditions were favorable for bears. Being omnivorous generalists of forested and edge habitats, this species must have been a common resident of the Valley Fringe. Although no population numbers exist for the Valley Fringe, 1993 estimates for western Oregon are one bear for each 1.1 square mile.

Factors negatively influencing the bear population here are logging practices that result in the removal of snags and down logs used for denning, increased roads with associated human activity.

Cougar

The cougar was characterized as abundant to common throughout most of the forested parts of the watershed until the early 1900s. The bounty system along with habitat reduction reduced cougars to record lows in the 1960s when the state population was estimated as 200 individuals. It was then predicted this species would be extirpated by the 1970s.

Management practices since then have resulted in an increase of this species and they are now distributed throughout the State except in metropolitan areas and other areas with a heavy human presence. Although no exact population numbers are available, cougars do exist within the Valley Fringe.

Red Tree Vole

Red Tree Voles are arboreal rodents of Douglas fir forests and are highly reliant on Douglas fir trees as a source of food and shelter. Nests are constructed on branches of this tree and needles provide essentially 100% of their diet. They are classified as Survey and Manage (S&M) species under the Northwest Forest Plan (NWFP).

Little is known about their historic distribution, but it can be safely assumed these species were restricted to the forested Valley Fringe of this watershed. Surveys have been conducted in recent years and will continue as required by the NWFP. These initial surveys have had mixed results, depending on the stand being surveyed. Some surveys have resulted in very few nests being found, while others have documented concentrations of these nests within one stand.

Bats

Seven species of bats are found within the Coast Range and may reside in the Valley Fringe. They include the long-eared myotis, long-legged myotis, fringed myotis, Yuma Myotis, little brown bat, the big brown bat, and Townsend's big-eared bat.

Surveys in adjacent watersheds have shown that snags are the preferred day roost sites with Douglas -fir being the dominant species. Concrete bridges have become important night roosts for these species because of the bridges ability to retain heat throughout the night. Caves and rock outcrops are important roost sites elsewhere, but are uncommon in this watershed.

Bats are important in controlling insect numbers and are attracted to bodies of water because of the abundance of prey at these locations.

Pileated Woodpecker

This woodpecker is classified as Bureau Tracking and is associated with forested habitats that have large trees, especially snags, for nesting and foraging. They have been documented in the watershed, including the Valley Fringe. They may not be observed as much as other birds because of their large home range (1000 acres or more).

Acorn Woodpecker

This woodpecker is a bird of grass/oak woodlands, and is reliant, as the name infers, on acorns as a major source of food. Although more common in the valley itself, they are likely to occur in the Valley Fringe where oak groves are present.

Purple Martin

This Bureau Tracking species requires cavities for nesting and open areas for foraging. Less than 200 pairs have been documented as breeding in Oregon, but are known to occupy the watershed,

including the Valley Fringe.

Western Bluebird
Another Bureau Tracking species, the western bluebird, like the purple martin, relies on snags for nesting and open areas in which to forage. They are documented as occurring in the Valley Fringe. Both the martin and western bluebird, have declined as nesting habitat is lost to felling of snags and competition from introduced cavity nesters like the European starling and house sparrow which are common in the periphery of the valley.

Clouded Salamander
Based on past habitat conditions the clouded salamander should have been present in most areas forested by Douglas firs, possibly being temporarily extirpated by fire events. This species is now scarce and patchy throughout the District.

Tailed Frog
This small frog is adapted to cool, clear and high gradient streams in the forests of the Pacific Northwest. It was probably widespread throughout this habitat type in the past. Presently, watersheds with extensive logging often have streambeds that are blanketed by silt, and tailed frogs are rare or absent in these streams.

Presently, tailed frog numbers are often small and isolated and appear to be remnants of a once larger population. One location has been documented in the Valley Fringe: four tadpoles were located in January Creek, a small tributary to Poodle Creek. This location raises the likelihood that there are other small populations within the watershed.

Northern Red-legged Frog
Records indicate this species was much more common than it is now. The reasons for this decline are not clear, but may be attributed to introduction of bullfrogs and centrarchid fishes, chemical pollution, and habitat loss.

Western Pond Turtle
This turtle probably existed in large numbers in this watershed, and is still present in many locations. However, habitat degradation seems to be preventing reproduction at many locations. These turtles are long-lived (>50 years in the wild) and can exist where young and eggs cannot survive. The same introduced predators that prey on the red-legged frog have had a profound negative effect on the pond turtle as well.

Past and ongoing research with subsequent management strategies have produced positive population changes, and such programs managed by the Army Corps of Engineers have been particularly beneficial in the Fern Ridge Reservoir area.

Sharptail Snake
This snake is currently designated as a Bureau Tracking species. It was probably more widespread in the watershed in the past. It is a species of grass/oak woodlands and this habitat is becoming increasingly scarce because of conversions to pasture or conifer stands. Currently, any population on the District is considered important because they represent the northern and most severely fragmented part of the range. They have been documented from at least one site in the Valley Fringe.

Oregon Megomphix
This species is a terrestrial snail found in Pacific Northwest forests and is closely associated with hardwoods (particularly bigleaf maple) and coarse woody debris. Its activity is mostly confined to the subsurface of the forest floors. In Oregon, this species prefers low to mid elevations and is found almost exclusively below 1500 feet. This species was included as a Survey and Manage (S&M) species. Current management direction is to place a habitat area of 0.25 acres around sites discovered prior to 1999.

IV. ENVIRONMENTAL CONSEQUENCES

A. UNAFFECTED RESOURCES
The following resources are either not present or would not be affected by the proposed action or alternatives: Areas of Critical Environmental Concern, prime or unique farm lands, floodplains, wetlands, Native American religious concerns, hazardous or solid wastes, Wild and Scenic Rivers, Wilderness, low income or minority populations, and air quality .

B. CULTURAL RESOURCES - are not expected to be affected by the proposed action alternative. If in connection with the proposed action there is an encounter or awareness of any objects or sites of cultural value, such as historical or prehistorical ruins, graves, grave markers, fossils or artifacts, the site specific proposed action would be suspended until mitigative measures are established.

C. ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION

AQUATIC AND RIPARIAN RESOURCES
The proposed action would require some short-term disturbance to the road right-of-ways, riparian areas, and stream channels. Primary adverse impacts would include short term reduction in riparian vegetation; a transient increase in sediment from culvert removal and / or replacement, road rehabilitation and channel structuring; and disturbance of fish and invertebrates in the stream channel during culvert removal and / or replacement and channel structuring. Barricading or closing of roads would reduce road traffic both in the upland and riparian areas, providing associated positive effects on water quality and aquatic communities. All actions are in areas that have previously been disturbed by management activities.

In the long term, the proposed design features would reduce the potential for sediment to enter the stream by creating additional drainage features in the road prism and by removing undersized stream crossing culverts that have excessive amounts of fill that are subject to failure due to lack of road maintenance. Removal of stream crossing culverts that are fish passage barriers would improve access to habitat for both resident and salmonid fish species as well as macro invertebrates.

Road decommissioning and culvert removal would reduce the extent to which the existing road systems within the Riparian Reserve function as an extension of the stream network, and would restore or enhance the connectivity of the stream channels to the floodplain and Riparian Reserve by eliminating some stream crossings.

The Long Tom River and tributaries, from it’s confluence with the Willamette up to the Fern Ridge Dam are designated Critical Habitat and Essential Fish Habitat for the Upper Willamette spring chinook salmon. No spring chinook have been documented using the river above the dam at

Monroe. Consultation for Critical Habitat, Essential Fish Habitat (EFH), and ESA as related to Upper Willamette spring chinook salmon are not necessary based on the absence of any spring chinook, lack of suitable habitat, channel configuration and stream gradients on BLM managed lands in the proposed project area.

BOTANICAL RESOURCES

Special Status Plants: All project work would be in connection with the closing of existing roads, with no additional distubance beyond the existing right-of-way. Since these areas have been highly disturbed in the past, no impacts would be expected to any threatened, endangered, or other special status or Survey and Manage plant species. No additional botanical surveys would be required.

Noxious and Non-Native Plants: In the long-term, the proposed road closures would be expected to limit the spread of non-native and noxious weeds. However, in the short term, there would be potential for weed increases and spread from the use of heavy equipment required for project implementation. In addition, some of the proposed road closures would make weed infestations more difficult to access for treatment.

Mitigation Recommendations: Cleaning of heavy equipment prior to use in road decommissioning, and use of weed-free, native seed for erosion control, would help mitigate potential increases in non-native and noxious weeds. In addition, mechanical treatment of isolated roadside weed infestations prior to road closures would further reduce weed spread and help to maintain healthy native plant communites in the project area.

WILDLIFE

Many wildlife species have become accustomed and some, even attracted to human activity resulting from forest road networks. Decreases in current road densities would be beneficial to those species favoring isolation from people.

Species such as the spotted owl and marbled murrelet are bothered by human disturbance associated with roads and generally avoid contact. Corvids (jays, crows and ravens) on the other hand are attracted to such activity because of curiosity and the potential for food in the form of garbage that often results from uncaring people. A reduction in the current road density would reduce the stress caused by human activity associated with roads and the compounded stress added by increased numbers of corvids and raptors that prey on the eggs and young of spotted owls and murrelets.

Large mammals such as elk, deer, cougars and bear prefer to keep a comfortable distance from humans. Closing of roads would further limit vehicles and subsequently reduce the amount of human activity disturbing these animals; especially during hunting season.

In addition to mitigating direct disturbance, the reduction of the road network would result in elimination of some of the dissecting thoroughfares, thus contributing to larger, more contiguous habitat for a variety of species.

These projects would result in minor impacts within the work areas in the short term. The possible removal of some young Douglas fir trees could result in the removal of red tree vole nests. Consequently, surveys for this species would be conducted prior to the action. If any nests are found, appropriate mitigation would be required to protect the species.

Although there may be some short term negative impacts to wildlife due to audio disturbance, the overall results would benefit wildlife species because of reduced human disturbance.

Formal consultation with the United States Fish and Wildlife Service (USFWS) has been conducted for Fiscal Year 2001 and it was determined these actions would be a “May affect, but not likely to Adversely Affect” the spotted owl and marbeled murrelet due to potential audio disturbances to these birds during the latter part of the nesting period. There is “No Affect” to any other Federally listed or proposed species known to occur in the vicinity.

RECREATION

These road closures would not affect dispersed recreation activities within the watershed since numerous other BLM roads are available in this watershed for public use. Most proposed closures are spur roads of a few hundred feet to one half mile in length, and end at old harvest areas with minimal visibility.

Some road closures would improve public safety concerns expressed by rural landowners by removing hazardous shooting areas near residences that gun enthusiasts use for target practicing.

Due to the checkerboard ownership and Right-of-Way agreements with industrial landowners some road closures would be implemented only with their cooperation. Additional areas may be gated in the future to reduce fire hazards or garbage dumping but would allow seasonal openings for hunting purposes.

VISUAL RESOURCES

Affects would range from no affect to some enhancement of visual resources within the watershed from the proposed action.

SOILS RESOURCES

Slope Stability Concerns

The direct effect of decommissioning roads is to correct any possible runoff concentrations that could lead to a landslide delivering sediment to a stream and creating fish habitat concerns and water quality issues. Road failures exert a tremendous impact on natural resources and can cause serious economic losses because of blocked streams, degraded water quality, destroyed bridges, ruined spawning sites, lowered productivity of forestlands, and damage to private property. Corrective action includes the removal of culverts, the obliteration of ditch lines, out sloping the road and returning drainage to its natural hill slope contours.

The indirect effect of following the basic principles of hill slope hydrology and recognizing specific conditions of slope and soil during road decommissioning is to return hill slope mass wasting processes to their natural stochastic state. Although landslides naturally provide instream structure with gravels, cobbles, boulders and large wood, forest roads have accelerated the frequency of landslides (Sessions, 1987) and removed productive soils from hill slopes.

Soil Compaction/Site Productivity Concerns

Direct impacts to soil productivity from road decommissioning and road closure are a general reduction in area of soil compaction and a quicker return of higher site productivity after tilling, water barring and the addition of organic matter. Soil porosity is an essential component of site productivity, instrumental for water infiltration, water storage and gas exchange. Soils with good porosity have favorable conditions for root growth, water movement, nutrient uptake by roots, and

mychorrihizal growth.

Indirect effects of decommissioning and closing roads are that OHV use and dumping could be reduced because access is limited. Decommissioned roads that are blocked and water barred, subsoiled and rehabilitated by pulling slash on the road bed, removing culverts, pulling fills out of stream crossings, and reshaping stream banks should not require maintenance and the road prism should quickly revegetate and be restored to a more natural condition.

Road Sedimentation Concerns
Direct effect of the proposed action to close and decommission roads is that sedimentation would be reduced and water quality would be improved. The direct effect of reducing miles of roadway is a reduction in traffic. Traffic is the driving force behind sedimentation from forest roads (Bilby et al, 1989). By directing any runoff to filter onto the forest floor, sedimentation would be minimized. However, direct effects also include the temporary addition of sediment to streams during decommissioning of roads. Any impacts to the streams during road decommissioning are expected to be short-term and generally occur after the first rainfall following activity. By restricting equipment operation to summer low flow periods (July 15 to October 15), the amount of sediment delivered to streams can be minimized.

Indirect effects include downstream impacts to stream channels from fine sediment moving through the watershed during high flows from road decommissioning activities.

D. CUMULATIVE AFFECTS (PROPOSED ACTION)
This analysis incorporates the analysis of cumulative effects in the *USDA Forest Service and USDI Bureau of Land Management Final Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl, February 1994, (Chapter 3 & 4)* and in the *Eugene District Proposed RMP/EIS November, 1994 (Chapter 4).* These documents analyze most cumulative effects of road management activities. None of the alternatives in this proposed action would have cumulative effects on resources beyond those effects analyzed in the above documents. The following section supplements those analyses, providing site-specific information and analysis particular to the alternatives considered here.

The cumulative effect of decommissioning roads and closing roads is increased consistency with all of the Aquatic Conservation Strategy Objectives. The proposed action includes road closures that would result in a net decrease in the area of compacted road surface and miles of road in the Long Tom watershed. More natural hydrologic cycles would be restored on the hill slopes and floodplains. The frequency of landslides and the sediment regime of the aquatic ecosystem would return to more natural levels in the long term. Traffic would be eliminated and surface erosion from roads would be reduced improving water quality for the watershed. The required road maintenance and monitoring required in the long term to meet water quality objectives would be reduced. Long-term positive cumulative effects to soil productivity are anticipated as a result of implementing road closures.

The Proposed Action would contribute cumulatively to the connectivity of habitat within the watershed for wildlife species and would provide for decreased disturbance to wildlife from vehicle traffic. Federally listed threatened or endangered wildlife within the watershed would benefit from the decreased disturbance in the long term.

The Survey and Manage reserve areas provided together with the Riparian Reserves and LSR across the watershed would maintain and contribute to the long term continued presence and viability of Survey and Manage species populations within or near the project areas and watershed. These species would be managed in accordance with the District management strategy developed for these species over time incorporating adaptive management as more information becomes known for these species. The proposed road decommissioning would contribute cumulatively to the restoration of the native vegetation component of the watershed by reducing the spread of non-natives and noxious weeds.

No cumulative negative impacts to recreation are anticipated from the proposed action except for a decrease in potential recreational access. The proposed action does not change the legal status of public access to the parcels of land. Eliminating access to remote areas would reduce the amount of illegal dumping occurring in the Coast Range.

E. ENVIRONMENTAL CONSEQUENCES OF THE NO ACTION ALTERNATIVE

AQUATIC AND RIPARIAN RESOURCES

Some road segments left unmaintained would allow for a greater risk of sediment delivery to streams and possibly large road fill failure. Hydrological, fisheries and aquatic connectivity to the Riparian Reserve would not be improved in some site specific circumstances.

BOTANICAL RESOURCES

The road transportation network would continue the spread of noxious weeds by casual public and administrative vehicle traffic. Scot's broom may be removed in the future under the District noxious weed program, however seed sources would remain in the road way and provide a constant future source for spreading infestations if the roads are open to vehicle use.

WILDLIFE

No consultation would be needed under the No Action alternative; however due to these roads being open, disturbance would continue to be a periodic occurrence to any Listed Species located near by.

RECREATION

Roads would continue to be managed under the current general RMP direction.

SOILS RESOURCES

Slope Stability Concerns

According to the Long Tom Watershed Analysis, many of the slope instability areas have been identified and corrective action taken, but slope instability is variable and requires monitoring and continuing maintenance of culverts and ditch lines. The direct effect of coupling limited maintenance and hydrologic processes is to set-up road failure. There is always the risk of slope instability along a road prism and direct and indirect effects of landslides would continue with sedimentation to streams and loss of soil productivity on hill slopes.

Soil Compaction/Site Productivity Concerns

The direct effect of leaving roads open is continued compaction and loss of site productivity. Impaired infiltration, water storage, and gas exchange would persist on many unnecessary roads. OHV use would continue expanding the network of dirt roads with increasing compaction and soil displacement. The indirect effect is continued easy public access allowing OHV expansion of dirt

road networks and dumping of garbage and meth labs.

Road Sedimentation Concerns
Under this alternative, many of the Aquatic Conservation Strategy Objectives may not be met because taking no action would not necessarily maintain the physical integrity of the aquatic system, water quality, or the sediment regime in the watershed. Continued access allows sedimentation from higher traffic levels. Road-related sedimentation to streams would continue to occur and potentially escalate because of unregulated OHV road expansion and a lack of maintenance.

F. CUMULATIVE AFFECTS (NO ACTION)
In the absence of natural disturbance, road use and road maintenance, the current condition of roads would gradually become more stable over time with a slow improvement in quality of habitat as vegetation encroaches into the existing roadway . However, the no-action alternative would leave existing culverts in place and would not eliminate the potential for culvert failures which may increase over time due to deterioration of the culverts. Culvert failures could cause large sediment loads on the stream systems if it does occur. The condition of these roads would require periodic monitoring over time and periodic road and culvert maintenance to prevent road failures due to storm events and use; and to insure continued attainment of aquatic objectives.

The cumulative effect of taking no action would not be in compliance with the Aquatic Conservation Strategy Objectives. Cumulative effects include higher risks of road related landslides occurring and entering stream systems impacting fish habitat and water quality. Not decommissioning roads would result in no net reduction in miles of road in the watershed, and furthermore, there would be an increase of miles of roads created by OHV use. Higher sedimentation rates from surface erosion on trafficked roads would continue. Without eliminating public access on roads, more areas would be available for garbage and meth dumps. There would also be a landscape wide persistence of compacted dirt and gravel roads leading to productive losses of the soil resource. Continued casual public and administrative vehicle use of the road transportation network would contribute to the spread of noxious weeds in the long term. Wildlife disturbance from road use would continue to be a periodic occurrence to any Listed Species located nearby.

V. CONSULTATION AND COORDINATION
A. AGENCIES, GROUPS AND INDIVIDUALS CONSULTED

U.S. FISH AND WILDLIFE SERVICE
Formal consultation with the United States Fish and Wildlife Service (USFWS) has been conducted for Fiscal Year 2001 and it was determined these actions would be a “May affect, but not likely to Adversely Affect” the spotted owl and marbeled murrelet due to potential audio disturbances to these birds during the latter part of the nesting period. There is “No Affect” to any other Federally listed or proposed species known to occur in the vicinity.

NATIONAL MARINE FISHERIES SERVICE

CRITICAL HABITAT
The Long Tom River and tributaries from it’s confluence up to the Fern Ridge Dam are designated critical habitat for the Upper Willamette spring chinook salmon. Consultation for Critical habitat, Essential Fish Habitat (EFH), and ESA as related to Upper Willamette spring chinook salmon are not necessary based on the lack of suitable habitat, channel configuration and stream gradients on

BLM managed lands in the proposed project area. A response letter from the National Marine Fisheries Service (NMFS, 2001) addressing a joint BLM and USFS (Action Agencies) request for EFH consultation on three programmatic biological opinions (NMFS, 1999c) covering actions addressed in this proposal stated that consultation in the Upper Willamette River chinook Evolutionary Significant Unit (ESU) was not necessary based on information provided by the Action Agencies. A personal communication with Research Department personnel of the Oregon Department of Fish and Wildlife (ODFW, 2001) in Corvallis, Oregon indicated that no chinook had been observed at the Monroe dam and fish ladder trap during the 1995-96 trapping seasons in the Long Tom River. Although chinook passage over the fish ladder at the Monroe dam is possible, ODFW biologists believe that only the lower reaches of the Long Tom River (from the confluence to the dam) are used by chinook for over-wintering or off channel habitat.

B. LIST OF PREPARERS

The following BLM resource specialists have examined the Proposed Action and provided either written or verbal input utilized in this assessment:

Dan Crannell	BLM Wildlife Biologist
Leo Poole	BLM Fisheries Biologist
Mike Southard	BLM District Archaeologist
Graham Armstrong	BLM Hydrologist
Saundra Miles	BLM Recreation Planner
Jeanne Ponzetti	BLM Botanist
Karin Baitis	BLM Soil Scientist
Mark Stephen	BLM Forest Ecologist
Eric Meyers	BLM Civil Engineer Technician

VI. REFERENCES

Beschta R. L. 1978. Long-Term Patterns of Sediment Production Following Road Construction and Logging in the Oregon Coast Range. Water Resources Research, Vol. 14, No. 6, pp. 1011-1016.

Bilby R.E., K. Sullivan and S.H. Duncan. 1989. The Generation and Fate of Road-Surface Sediment in Forested Watersheds in Southwestern Washington. Forest Science, Vol. 35, No. 2, pp. 453-468.

BLM. 1986. Timber Production Capability Classification. Handbook 5251-1
U.S.D.A. 1987. Soil Survey of Lane County Area, Oregon. Soil Conservation Service.

Endangered Species Act. 1973. Endangered Species Act of 1973, As Amended through the 100th Congress. 16 U.S.C. 1531-1543.

Froehlich H.A. 1978. The Effect of Soil Compaction by Logging on Forest Productivity. Final Report – Contract No. 53500-CT4-5 (N), BLM, Portland, Oregon.

Larson K.R. and R.C. Sidle. 1980. Erosion and Sedimentation Data Catalog of the Pacific Northwest. U.S. Forest Service. Pacific Northwest Region, Portland, Oregon.

NMFS (National Marine Fisheries Service). 1999c. *ESA Section 7 Consultation for Programmatic Actions in the Willamette, Siuslaw, and Mt. Hood National Forests, and Salem and Eugene Districts Bureau of Land Management that are Likely to Adversely to Affect Upper Willamette River Steelhead and Upper Willamette River Chinook Salmon within the Willamette Province, Oregon* (OSB1999-0152). Habitat Conservation Division, Oregon State Branch, Portland, Oregon. July 28, 1999.

NMFS (National Marine Fisheries Service). 2001.

Oregon Department of Fish and Wildlife. 1992. Long Tom Subbasin Fish Management Plan. Corvallis Oregon.

Oregon Department of Fish and Wildlife, 2001. Personal communication (4/01).

Record of Decision/Standards and Guidelines. 1994. U.S.D.A., U.S. Dept of Interior.

Reneau S.L. and W.E. Dietrich. 1991. Erosion Rates in the Southern Oregon Coast Range: Evidence for an Equilibrium between Hillslope Erosion and Sediment Yield. Earth Surface Processes and Landforms, Vol 16, pp. 307-322.

Sessions J., Balcom J.C. and K. Boston 1987. Road Location and Construction Practices: Effects on Landslide Frequency and Size in the Oregon Coast Range. Western Jouranl of Applied Forestry, Vol. 2, No. 4, pp. 119-124.

Swanson F.J., Benda L.E. Duncan S.H., Grant G.E. Megahan W.F., Reid L.M. and R.R. Ziemer. 1987. Streamside Management and Fishery Interactions. Edited by Ernest O.Salo and Terrance W. Cundy. Institute of Forest Resources Contribution No. 57. University of Washington.

Swanston D.N. 1978. Effect of Geology on Soil Mass Movement Activity in the Pacific Northwest. Forest Soils and Land Use, Proc. Fifth North Amer. For. Soils Conf., Colo. State Univ. Forest Service, U.S.D.A.

USDA, Forest Service and USDI, Bureau of Land Management. February 1994. *Final Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl.* Washington D.C.

USDA, Forest Service and USDI, Bureau of Land Management. April 1994. *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl.* Washington D.C.

USDA Forest Service and USDI Bureau of Land Management (BLM). 2001. Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines.

USDI Bureau of Land Management (BLM). 1988. BLM Manual 6840 - Special Status Species Management (dated 9/16/88).

USDI, Bureau of Land Management. June 1995. *Eugene District Record of Decision and Resource Management Plan.* Eugene District Office, Eugene, Oregon.

USDI, Bureau of Land Management and Oregon State Historic Preservation Office. 1998. Protocol Agreement.

USDI, Bureau of Land Management. October 2000. Long Tom Watershed Analysis. Eugene District Office, Oregon.

U.S.G.S. 1969. Mineral and Water Resources of Oregon. State of Oregon Department of Geology and Mineral Industries. Bulletin 64.

Walker GW, Macleod N S. 1991. Geologic Map of Oregon. U.S.G.S.

Appendix A

LONG TOM WATERSHED ROAD DECOMMISSION LISTING

Road No.	Seg.	Miles
15-6-08.01		1.62
15-6-09.02		0.76
15-6-09.04	A1	0.39
15-6-09.04	A2	0.53
15-6-15	B	0.59
15-6-21	B	1.42
15-6-21.01	A	1.18
15-6-21.01	B	0.28
15-6-21.02		0.11
15-6-21.03		0.36
15-6-21.04		0.19
15-6-21.05		0.15
15-6-21.06		0.16
15-6-21.07		0.15
15-6-26.01		0.45
15-6-26.02		1.49
15-6-27		1.1
15-6-27.01		0.65
15-6-27.02		0.1
15-6-27.03	A	0.09
15-6-27.04		0.55
15-6-27.05		0.54
15-6-33	B	0.23
15-6-33.01	D	0.08
15-6-33.01	E	0.29
15-6-33.01	F	0.27
15-6-33.02	A	0.25
15-6-33.04	A	0.12
15-6-33.05		0.9
15-6-33.06		0.12
16-5-07	B	0.26
16-6-01		0.5
16-6-02	B	0.59
16-6-02.01	A2	0.29
16-6-03.01		0.08
16-6-03.02	A	0.22
16-6-03.03	A	0.11
16-6-03.04	A	0.48
16-6-03.05	A	0.21
16-6-05		0.26
16-6-05.01		0.11
16-6-05.02		0.1
16-6-05.03	A	0.38
16-6-05.04		0.19
16-6-05.05		0.12
16-6-05.06		0.24
16-6-07.02	A	0.62
16-6-07.03	A	0.6
16-6-08	B	0.15
16-6-08	C	0.62
16-6-08.02	A	0.14
16-6-09.01		0.09
16-6-09.02	A	0.08
16-6-09.03	A	0.95
16-6-09.04	A	0.18
16-6-09.05	A	0.17
16-6-09.06		0.18
16-6-09.07		0.18
16-6-09.08		0.24
16-6-15	B	0.14
16-6-17.03	A	0.26
16-6-17.05		0.27
16-6-19.01		0.54
16-6-19.02	A	0.6
16-6-19.03	A	0.1
16-6-19.04	A	0.25
16-6-20.01	C	0.12
16-6-20.01	D	0.11
16-6-20.01	E	0.14
16-6-26	B	0.12
16-6-28	D	0.51
16-6-33.01		0.38
16-6-33.02		0.05
16-6-33.03		0.18
16-6-33.04		0.08
16-7-01		0.82
16-7-01.01	A	0.2
16-7-01.02		0.1
16-7-01.03	A	0.16
16-7-12	A2	0.71
16-7-13.01		0.4
16-7-13.02		0.09
16-7-13.03		0.37
16-7-13.04	A	0.05
16-7-23.02		1
16-7-25.01	A	0.3
16-7-25.02	A	0.4
16-7-25.03	A	0.7
16-7-26		0.32
16-7-34.01	C	0.33
16-7-35.01	A	0.49
16-7-35.02	A	0.28
17-6-30	B	0.28
17-6-30.01	C	0.47
17-7-02	B	0.66
17-7-02	C	0.95
17-7-02	E	0.15
17-7-02.01	B	1.12
17-7-09	G	0.18
17-7-10	A1	0.08
17-7-10	A2	0.12
17-7-11	A	0.6
17-7-13	B	0.13
17-7-13	D	1.1
17-7-13.02		0.23
17-7-13.03		0.15
17-7-13.04		0.58
17-7-13.05		0.2
17-7-13.06		0.05
17-7-15	A	0.5
17-7-15.01	A	0.15
17-7-22.01	A	0.15
17-7-22.01	B	0.14
17-7-22.02	A3	0.3
17-7-22.03	B	0.72
17-7-22.04	B	1.2
17-7-22.05	A	0.58
17-7-22.06		0.1
17-7-36	B	0.37
18-6-03.01		0.15
18-6-05.05	A	0.4
18-6-05.05	C	0.1
18-6-08.05	B	1.02
18-6-09.06	B	0.05
18-6-14	B	0.47
18-6-17		1.01
18-6-18.12	B	0.04
18-6-21.04		0.26
18-6-27.01		0.35
18-6-27.02		0.54

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
EUGENE DISTRICT OFFICE

PRELIMINARY FINDING OF NO SIGNIFICANT IMPACT
Environmental Assessment No. OR094-EA-01-09

PRELIMINARY FONSI:

On the basis of the information contained in the Environmental Assessment, and all other information available to me, it is my determination that implementation of the proposed action will not have significant environmental impacts beyond those already addressed in the *Record of Decision (ROD) for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl* (April 1994) and the *Eugene District Record of Decision and Resource Management Plan* (June 1995) as amended by the *Record of Decision for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines, USDA Forest Service and USDI Bureau of Land Management January 2001,* with which this EA is in conformance, and does not constitute a major federal action having a significant effect on the human environment. Therefore, an environmental impact statement or a supplement to the existing environmental impact statement is not necessary and will not be prepared.